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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,330	04/19/2004	Stephen A. Anderson	NUKZ 2 00395	9483
27885	7590	03/06/2006	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			FEGGINS, KRISTAL J	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/826,330

Applicant(s)

ANDERSON ET AL.

Examiner

K. Feggins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12 and 16-26 is/are rejected.
- 7) ☒ Claim(s) 5-11, 13-15 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 12 & 16-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kojima et al. (US 6869158 B2).

#### **Kojima et al. disclose the following claimed limitations:**

\* regarding claim 1, in an ink container shell for an inkjet cartridge having a chamber for receiving ink (figs 8, 22, 23 & 26)

\* an optical ink detection device/reflective member, 30/ in the chamber//45/, said device including an interface surface for reflecting light in a scan plane from a first to a second exterior area relative to the container shell when an ink level in the chamber recedes to a given level (col 15, line 26-col 16, line 35, figs 1- 8);

\* the improvement comprising said ink detection device/30/ including at least two elements/34A & 34B/ (figs 8-12, 14, 16, 7, 19, 20).

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\* regarding claim 2, wherein said at least two elements include a recess of light transmitting material in a wall of the chamber and an optical prism received in said recess (col 15, lines 16-67, figs 8-12, 14, 16, 7, 19, 20).

\* regarding claim 12, wherein said wall of said chamber is a bottom wall (see fig 8).

\* regarding claim 16, wherein said at least two elements include separate first and second optical prism adjacent one another in said chamber/45/ (figs 8-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

\* regarding claim 17, wherein said at least two elements include a third optical prism separate from and adjacent one of said first and second prisms (figs 8-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

\* regarding claim 18, wherein each said first, second and third optical prism is triangular (figs 8-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

\* regarding claim 19, wherein said chamber includes a wall and said first and second prism are on said wall (fig 8, element 30, & figs 9-12, 14, 16, 17, 19, 20, elements 34, 34A, 34B).

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\* regarding claim 20, wherein said first and second prisms are integral with said wall (fig 8, element 30, & figs 9-12, 14, 16, 17, 19, 20, elements 34, 34A, 34B).

\* regarding claim 21, wherein said at least two elements includes a third optical prism separate from and adjacent on of said first and second prism (figs 8-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

\* regarding claim 22, wherein each said first, second and third optical prism is triangular (figs 8-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

\* regarding claim 23, wherein said wall is a bottom wall and said first and second prisms are integral with said bottom wall (fig 8, element 30, & figs 9-12, 14, 16, 17, 19, 20, elements 34, 34A, 34B).

\* regarding claim 24, a third optical prism on and integral with said bottom wall, said third prism being separate from said first and second prisms (fig 8, element 30, & figs 9-12, 14, 16, 17, 19, 20, elements 34, 34A, 34B).

\* regarding claim 25, wherein each said first, second and third optical prism is triangular (figs 9-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

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\* regarding claim 26, wherein said at least two elements include at least one optical prism separate from said shell and mounting elements on said shell and prism for mounting said prism on said shell (figs 9-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 & 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (US 6,869,158 B2) in view of Kosman et al. (US 4,783,137).

**Kojima et al. disclose the following claimed limitations:**

\* regarding claim 4, wherein said prism is triangular (figs 9-12, 14, 16, 17, 19, 20, see elements 34, 34A, 34B).

**Kojima et al. does not disclose the following claimed limitations:**

\* regarding claim 3, an optical gel between said recess and said prism.

**Kosman et al. disclose the following claimed limitations:**

\* regarding claim 3, an optical gel between said recess/sleeve/ and said prism (col 28, lines 24-27 & lines 50-53) for the purpose of increasing the optical coupling efficiency.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize an optical gel between said recess and said

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prism, as taught by Kosman et al. into Kojima et al. for the purpose of increasing the optical coupling efficiency.

***Allowable Subject Matter***

5. Claims 5-6, 8-11, 13-15 & 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oda et al. (US 6,726,313 B1) disclose an ink jet printer having an ink detector sensor that detects the ink level in the second chamber. Takada et al. (US 6,767,075 B1) disclose an image forming device capable of detecting the presence/absence of ink as well as whether an ink tank is mounted. Hanaoka et al. (US 6,966,642 B2) disclose a printer and ink tank capable of precisely detecting that ink has run out.

### **Communication With The USPTO**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Feggins whose telephone number is 571-272-2254. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talbott Dave can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 2/04  
**K. FEGGINS**  
**PRIMARY EXAMINER**